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Baudot, V21 and V.18 on request

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In total experience of working for and in deaf telecommunications it has been my observation that industry does not include or accommodate in planning or building accessibility without regulation.

For those who are not familiar with my track record I am the daughter of Andrew Saks one of the original three deaf men. My and Bob Weitbrecht and Jim Marsters started deaf telephones or TTYs as we called them and began what we also called the deaf telephone network.

Not only have I grown up with two deaf parents and was for most of my early life till my teens I was my parent's telephone interpreter. I was there from the very beginning of deaf telephone access. As a young adult I later went on to start the first deaf telephone network in the UK back in 1972 in conjunction with the three original founders and many deaf people in the UK and then British Post Office

I have been working toward a goal of worldwide compatibility for deaf telecommunication since 1972 with textphones since the moment I started the deaf telephone network with our English-speaking neighbours in the UK. We were for a brief moment technically internationally compatible give or take a baud rate with Baudot protocol machines

I think for many of us the first Deaf Transatlantic Call gave the UK deaf and the USA deaf hope that we would be able to have an international system running on along the normal hearing telephone. It seems so possible as we had two English speaking countries working together. This was also the first time I had worked directly with the FCC getting a one-day waiver for data transmission across the voice network across the Atlantic previously prohibited on humane grounds.

Unfortunately in the UK the system was dismantled and later a totally incompatible system put into its place based on V21. Even there relay system excluded the Baudot code even though most of the textphones were American and were dual coded to include V21 and Baudot. There were several reasons for this action. Some of people wanted the devices and the system to be British. There was also a narrow-minded view that the deaf didn't need to have international telephone communication. This attitude was still prevalent as late as the early 1990's. Everyone wanted to move on to new technology without taking to migrate from the old. There was in fact a misguided attempt to try and stamp out Baudot to try and force people to move on to new technology. This is not dissimilar to the moment here to That policy was doomed to failure.

Most other countries did a similar action. However in Europe some countries did arrange to be compatible. And what devices in the USA did export to these countries always included along with the particular countries code, Baudot access. In an underground way we did have a tine few people who could using Baudot communicate internationally though authorities did frown on that.

In the USA the same attitude and attempt to stamp out Baudot started in the 1980's with Bell 103 or ASCII TTY protocol.

Once a protocol is established to stamp out the Old and try to switch over everyone to the New is an impossible task. This will always be misguided policy to try and force people to move on to new technology. Migration is on the only way that works. And using International Standards with regulation and through International co operation with international treaties if necessary is the only way to keep the flow of communication open to all of us disabled or otherwise.

So far I have been talking about TTY's and the old PSTN. The very same principal exists for the migration for all of us hearing deaf blind and from whatever country we are from from the PSTN to IP based networks. It in my opinion that action if is attempted by industry to exclude any of the devices that are presently covered in the ITU Standard V.18 will violate will the very principal of human rights of access as intended by the ADA and telecommunications acts of the recent past. That regulation needs to be updated to

Because of this I took my fight to ITU in Geneva and began to work under the system of International Standards making in 1991. It was them called CCITT and is presently today called ITU-T. I worked with Dick Brandt who was largely responsible for creating V.18. Many other Europeans work together on this standard. It has been improved over the years and have sequent work.

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Many of the standards that have been created, most specifically V.18, have not really been implemented by industry over the years. V.18 was extremely important because it actually and visibly translates for the users all the different flavors of text telephony throughout the world. We had great hopes in those early days, back in the early 1990s that industry would simply put this particular chip when it was made, into their modems. They did not want to pay for the development costs.

This is just the beginning of several illustrations that I wish to make showing that without regulation by the FCC that industry will not comply and not voluntarily actually do what needs to be done to make deaf telecommunications truly accessible.

Now that we are in multimedia we have plenty of other standards that we have made to allow all the flavors of text telephony to pass through the gateways. Mr Gunnar Helfstrom, in presenting on May 7gave you a brief synopsis in his presentation of some of these standards. Also Mr Paul Jones of Cisco gave a very comprehensive explanation of total conversation which is an ideal situation if every videophone maker, for example, employed those techniques and those standards unilaterally across the globe, we really wouldn't have much trouble with videophones. But the problem doesn't just lie with the irregulation in the Federal Communications Commission (FCC), though it is extremely

important that the FCC lead the world in this regulation. The problem is more to do with an attitude: throw out the baby with the bathwater has been the attitude of industry ever since I have been in the racket of deaf telecommunications.

From the days that I have described in England to the present comment made by the representative of T Mobile with the blackberry, "Let's get rid of the old technology" he said. That I have heard a million times. We can't do that. Claud Stout of Telecommunications for the Deaf Inc. said we need time to migrate. There's another reason. Not only do the standards exist but why should deaf people be relegated to one device? The hearing world uses so many different devices and has fun and finds useful and it's a necessity to use a varying series of devices in communicating, and they have ears. We, those of us in the deaf community, and I am a coda (a child of 2 deaf adults), so therefore I am a part of the deaf community, have the same right to be able to use whatever device works for me.

The problems in using net messaging (which a lot of people feel is the ideal solution because it is real time) is that how many doctors are going to be on real time and going to be there for you when you are on net messaging when you need to call them? The relay service serves a purpose but hearing people won't use it so we can't always rely on net messaging or relay services, so we use email. This is a perfectly good method, but it is not live, real time. SMS is not real live time. T he only thing that really is reliable that works without electricity, that can work with a battery, that can work with a phone that doesn't need electricity in an emergency is an old fashioned TTY or TDY, or text telephone. There are text telephones that are very old that continue to work well today. I am a possessor of several.

Why do I need to choose? Why does industry dictate to me what is right for me? You wouldn't get away with this in a hearing society, totally where people could choose to do what they wanted if there was a market backlash. There is a market backlash, but because we are not large consumers we don't count.

I want to give another example of where the market was surprised at the response of a regulation to include captioning in televisions. It is more widely used by the hearing world primarily because there are more of them, but it is used in a way that the hearing world never expected and it has become the norm to be able to have text in your television. The same should apply to the TTY, because it is normal. It also is important that we have real time live communication.

There are other problems as Judy Harkins and Greg van der Heifen have pointed out in their document. The emergency services have not been fully developed to take on SMS, or as we know, text in mobiles and a lot of people have decided that they are getting rid of their TTYs because they find that it does take too long and that needs to be addressed, but that's no reason to say that TTYs aren't used, and they aren't used by people who are young, because they are. It depends on the circumstance. It depends on the circumstance. The device you choose fits the situation and the need that applies to you at the time. Why should the deaf community be relegated to one device? They can have,

and should be able to have, all of the devices that they presently use now and they should be carried over into the future until such time as they are no longer useable.

One example that was given which was very helpful in getting some legislation passed in the UK was that when OFTEL was in existence there was a gentleman called Sir Brian Carsberg who was the Head of OFTEL at that time, the Chairman. He stated that telecommunications for the deaf should be regarded in the same way that world telecommunications is regarded in general. In other words, the cities supported the lower population of rural areas in order that telephone communication be unilaterally available, affordable and compatible.

Now, that was done in the early 1990s. We still haven't got that completely, even for the hearing world, with the advent of broadband still being inaccessible in many rural areas. But that particular attitude is there and there are ways that the attitude I have just described is used in the making of future regulations as OFCOM.

The FCC has been highly regarded in the fact that their ADA is probably the strongest disability legislation that has ever existed in the history of our world . The DDA, the Disability Discrimination Act, in the UK was directly patterned on that. It is not as strong, but they might catch up. The Europeans and the United States and Australia and Canada, all these people worked at ITU. There are presently many people working in ETS, and I would advise everybody to look at Gunnar Helstrom's website on Omnitalk, to get a good idea of the different standards and different organizations that are working towards the common goal which is global compatibility with retro-compatibility to legacy devices. But the let-down and the fall-down has always been the irregular implementation, if any implementation is done at all by industry.

Industry is governed by of course profit, and companies who are small may have problems in competing if they have to include standards that they find expensive. However, everybody adapts, and if the regulations reflect what needs to be done, the mentality will change. It should be a matter of course that all standards directed at disability, the elderly and any accessibility for a major population of devices such as the text phone in the United States and throughout the world be included.

It is dead simple in my mind how to go about it. The gateways: I have always said the gateways should do the de-mod/re-mod. It is so simple in principle to do this, but it will cost money, so people don't want to do it.

I have it on authority from a large network builder that they will be employing more of the standard of V.18 and VT140 to enable text to pass though IP networks. I find the fact that the United States is going on a baudot only route to be really obstreperous and nearly as bad as the exclusion that the UK did, back in the 1980s and early 1990s.

We can't have a baudot only society. There are problems in the fact that the baudot code is slow. That is just traditional, because of the origination of its being, when we had to use 66 wpm teleprinter (or as we called them in the US, teletypes), to be our printing

devices. It was never necessary to run baudot at that speed but since that is the mainstay in the embedded population we must look at that. But if these signals are converted into pure data with the VT140 standard we've got absolutely no worries in sending these packets across, providing that the gateways (and that means domestic, as well, and I will explain why in a minute) have the ability to translate all the flavors of text phones in the world. Text phone supportable: if text phones were assured of a future, and were incorporated to be received, translated and carried through the new IP system people would use them, because there is no other real time, instant communication like voice and hearing communication available but text phones.

As I said, it is not appropriate to rely on the computer. Boot up time is not good, if you are having a heart attack. Boot-up time may not be possible if your battery's dead and there is no electricity. But little, compact TTYs work on a battery and you can pack them anywhere and they are smaller and lighter than a computer. They also can exist in small portables. Nokia makes a really nice one, or used to, but then it decided that it couldn't make that device any more because the demand wasn't there.

Without regulation, and regulation has to be done very carefully, devices may actually be market driven but the ability for those devices to be used through our networks must be regulated or we will have too much of patchwork, even worse than we have now, of devices which will work in certain areas but not in others. Australia experienced a real bit problem when the network builders built digital gateways and did not include the existing baudot 50 international code that was used by their textphones. It wiped out one third of the population of textphones, and deaf people didn't know why their textphones didn't work.

Now we're going towards the possibility moving on to V.18 textphones, and V.18 textphones are in existence and work, and can be integrated into computer networks along with your telephone to allow hot keying out to speak directly to a text phone operating individual by using your computer. It can be done, but if the signals don't pass through the network, do not convert and take care of all the different codes, we have no chance of migration.

The young will continue to continue to think that it is great to use text, but sometimes, I think, to have a detailed conversation where you can actually get a response (that's more like talking to somebody live) will still be important. The fact that the hearing world has adopted text, that texting through mobile phones, net messaging, and email are all very popular amongst the hearing world, the hearing world wants to move the deaf community into that. Without really looking at the real aspect of what is communication, what do we really need in communication if we adopt……

TAPE TURNOVER – MAYBE A BIT ID LOST HERE

The FCC needs to get involved and understand the standards that have already been created by some of the finest minds in telecommunication and in IP technology. I think it is vitally important that note be taken of the comments made on the rehabilitation

engineering research centre of telecommunications access from Greg C van der Heifen and Judith Harkins, especially on V111.IP services should be based on their functionality. If the deaf can use that, that's great. It's a good standard to use. If we can have international, global compatible standard based communication that everyone can use, that would be ideal for the hearing world.. But if the deaf can use it, then everybody can use it and that's really the key in my mind: that there is an amazing thought that if we make global communication possible for deaf people using text, video and voice, that becomes a standard that no one would ever make a device that didn't have these capabilities to interoperate, we would solve a lot of communication problems that we have in other parts of the world. China, in ITU, is creating an SMS standard for their computer systems, but it is not even compatible with their SMS systems.

The problem isn't just in the US. The problem is in other parts of the world, but if the US joins with Europe on this particular issue and in unifying the deaf shows the world that we can run a global, unified, standard based, interoperable, compatible IP network that will handle data as well as voice text and video the rest of the world would have to follow suit. It's something to think about.

I'll leave you with this one other funny note. Back in the 1970s, when there was a docket before the FCC that stated that ATT could not use data across the direct dial voice telephone network in between Great Britain and the United States it didn't occur to anybody that deaf people would need data text to have personal conversations and that would be comparable to a voice. Because I got that one day waiver to do the first deaf transatlantic call I did break that docket, and that docket was totally ineffectual after that and ATT began to be allowed to use their voice network for data and it gave the hearing world the facts. The deaf gave the hearing world the facts. The hearing world owes the deaf on the fact that because of them that docket was broken.

The same analogy will apply. You get legislation, regulation that allows all the flavors of text telephony to continue to exist: that we can still have real time conversation using the phone network, the PSTN through IP; that all text communication needs to be compatible with the original TTY communication; that mobile phones with SMS need to be interlinked into emergency services; and that it is possible to have mobile phones have text telephony linked up to them (and that that should be encouraged, since that hasn't been fully developed); but that every gateway can handle text telephony and that all people who create a videophone remember that just like in the television when we needed closed captioning, text should be an automatic factor. If you can do it for the television you can do it for the videophone. So we need text and we need to use T140 to enable each country's text to be able to invisibly translated for the user.

There are so many people I now who know how to do this in the work that I have been experiencing and helping towards in ITU and with those people who I work with who also work with IETF and many other organizations, both in Europe and here. Industry has to be, and I am going to use the word, forced into implementing these technologies that they create, in such a way that we can all participate. It will make such an impact on

the elderly population of which there will be a great many who will be losing their hearing as well as those who are born deaf and deafened by other aspects.

To ask the deaf community to throw away what they have for something that they don't know or some future possibility or for something that is not live, real time for something that needs boot-up time, for something that is not a telephone, for something that everybody doesn't necessarily have, is never going to work. Everybody is going to choose what they want to use, so all the devices that we have must begin to work in an interoperable fashion. So there is no question in my mind, that a committee has to be created within the FCC which allows some of these people, including myself, to participate and that regulation is really the only way that industry will do what its conscience doesn't seem to dictate.

Support. The entire document as written by Greg C van der Heiden, Judith E Harkins and Karen Pelt Strauss.

I totally support Omnitalk's view and Gunnar Helfstrom's presentation on IP communication using the technology and the standards that he illuminated at your meeting on May 7th. The US can set a valuable standard for the rest of the world, and I would encourage the Commission to do so.

Thank you for reading.